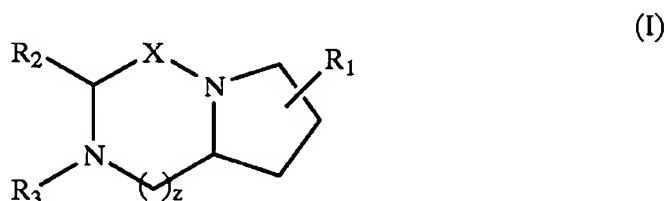


**Amendments to the Claims:**

**This listing of claims will replace all prior versions and listing of claims in the application.**

**Please amend claims 1 and 49 as indicated.**

Claim 1 (currently amended): A compound having the structure:



or a stereoisomer or pharmaceutically acceptable salt thereof,

wherein

R<sub>1</sub> is -L<sub>1</sub>-J;

R<sub>2</sub> is (CH<sub>2</sub>)<sub>y</sub>-W;

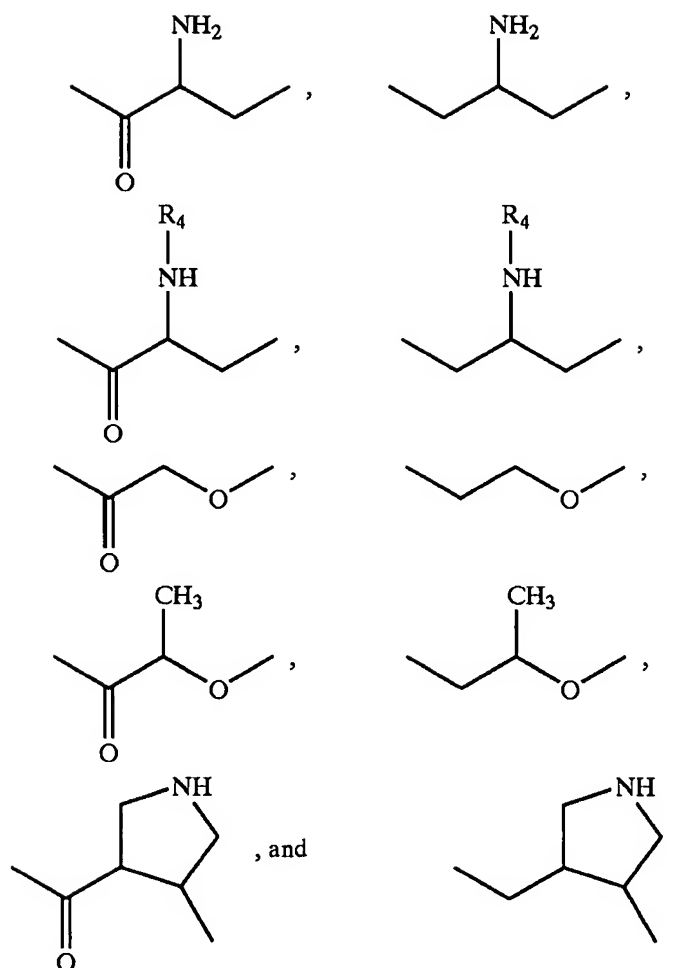
R<sub>3</sub> is -L<sub>2</sub>-Q;

L<sub>1</sub> is a linker selected from the group consisting of -(CH<sub>2</sub>)<sub>y</sub>-, -O-(CH<sub>2</sub>)<sub>y</sub>-, -O-, -NH-(CH<sub>2</sub>)<sub>y</sub>-,  
-(C=O)(CH<sub>2</sub>)<sub>y</sub>-, -(C=O)-O-(CH<sub>2</sub>)<sub>y</sub>- and -CH<sub>2</sub>(C=O)NH-;

J is a ring structure selected from the group consisting of substituted or unsubstituted aromatic carbocyclic rings, substituted or unsubstituted non-aromatic carbocyclic rings, substituted or unsubstituted aromatic fused carbobicyclic ring groups, substituted or unsubstituted aromatic carbocyclic ring groups wherein the rings are joined by a bond or -O-, and substituted or unsubstituted aromatic fused heterobicyclic ring groups; wherein in each instance the rings comprise 5 or 6 ring atoms;

W is a heteroatom unit with at least one cationic center, hydrogen bond donor or hydrogen bond acceptor wherein at least one atom is N;

L<sub>2</sub> is a linker selected from the group consisting of



Q is an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl;

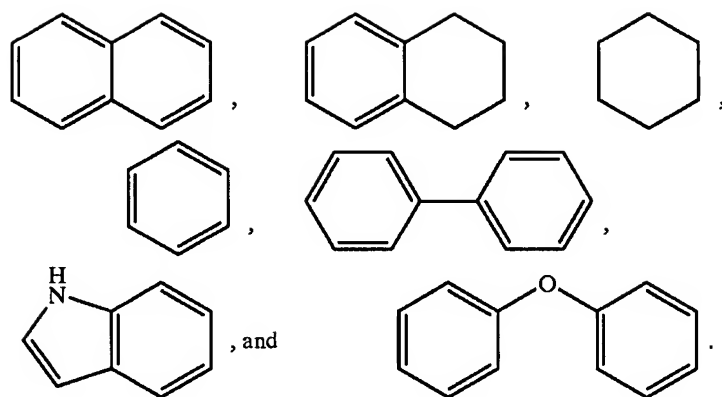
R<sub>4</sub> is a unit selected from the group consisting of an amine capping group, an amino acid residue, and an amino acid residue with an amine capping group;

X is ~~CH<sub>2</sub>~~ or C=O;

z is ~~O~~ or ~~H~~; and

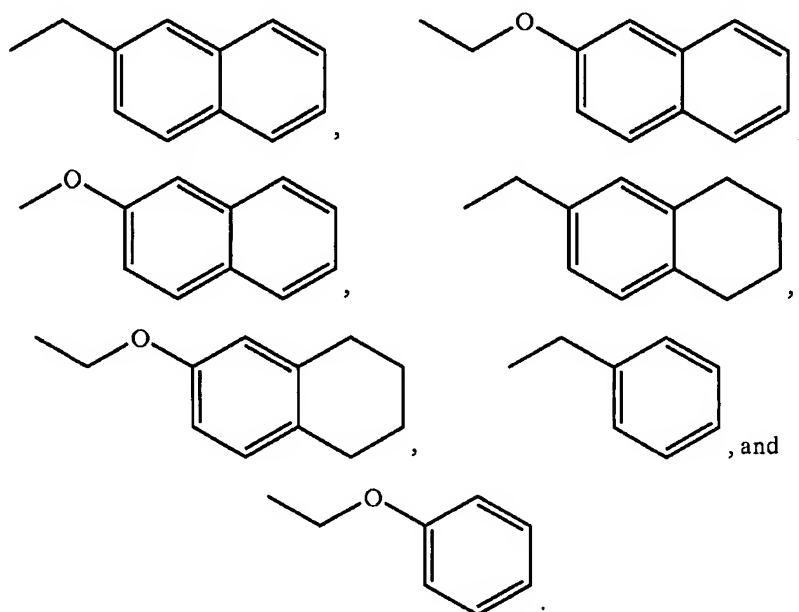
y is at each occurrence independently from 1 to 6.

Claim 2 (original): The compound of claim 1 wherein J is a substituted or unsubstituted ring structure selected from the group consisting of

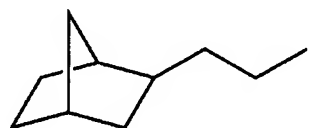
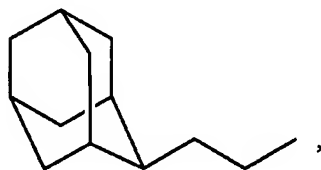
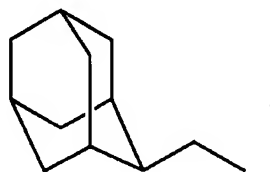
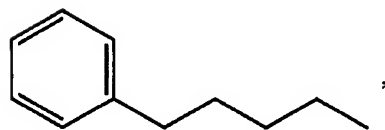
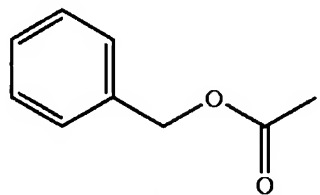
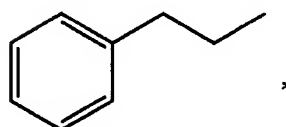
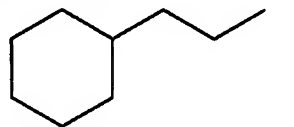
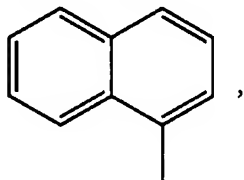
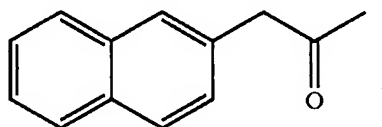
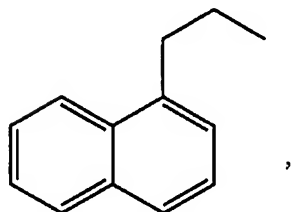
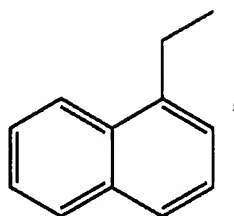
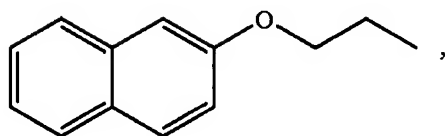
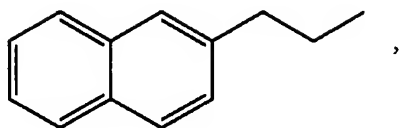


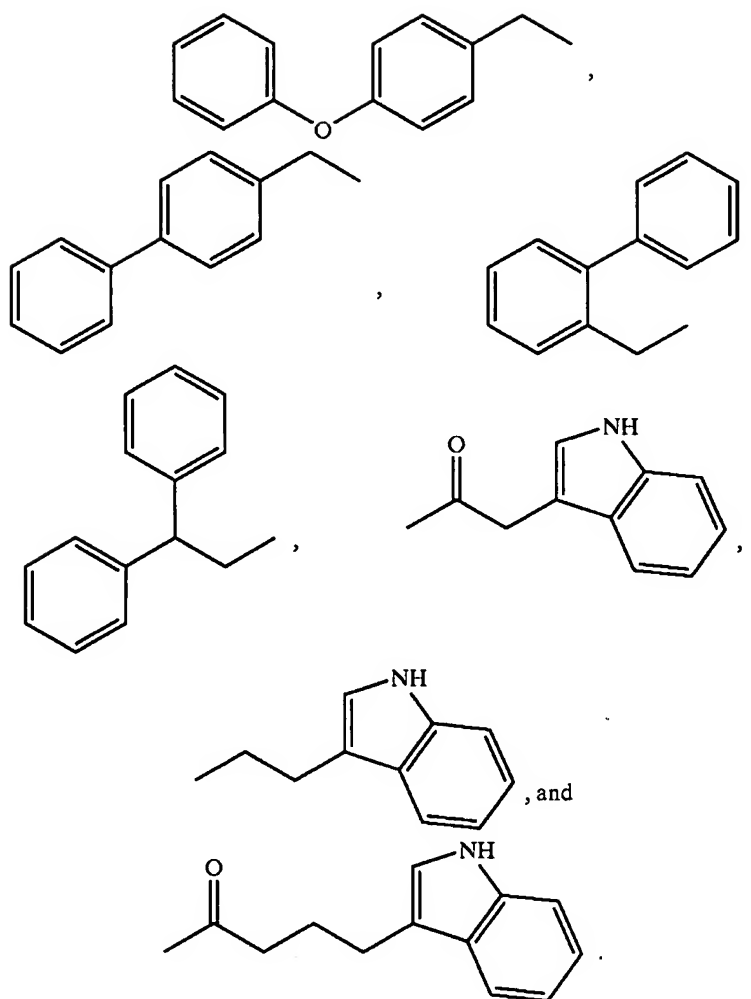
Claim 3 (original): The compound of claim 1 wherein at least one ring comprising J is functionalized with one or more halogen, alkyl or aryl groups.

Claim 4 (original): The compound of claim 1 wherein  $R_1$  is selected from the group consisting of

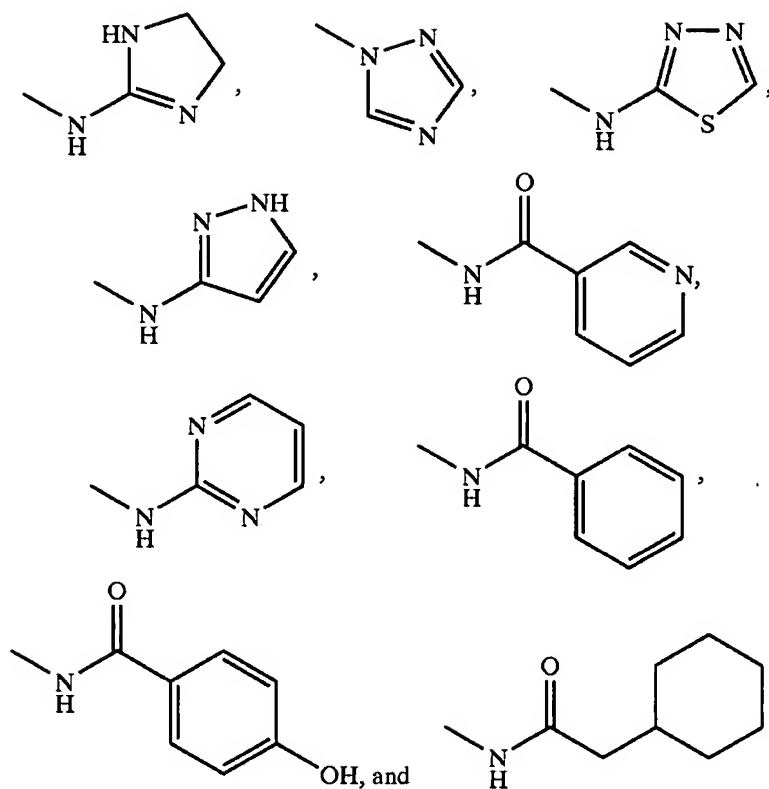


Claim 5 (original): The compound of claim 1 wherein R<sub>1</sub> is selected from the group consisting of

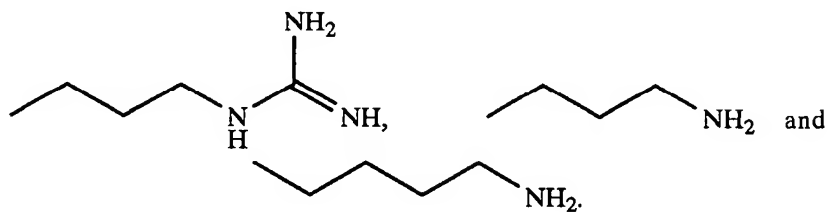




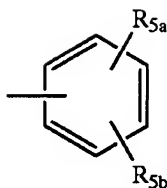
Claim 7 (original): The compound of claim 1 wherein W is selected from the group consisting of -NHCOCH<sub>3</sub>, -CONHCH<sub>3</sub>, -NH(C=NH)NHMe, -NH(C=NH)NH<sub>4</sub>Et, -NH(C=NH)NHPr, -NH(C=NH)NHPr-I, -NH(C=NH)NH<sub>2</sub>,



Claim 8 (original): The compound of claim 1 wherein R<sub>2</sub> is selected from the group consisting of



Claim 9 (original): The compound of claim 1 where Q is



and wherein  $R_{5a}$  and  $R_{5b}$  are optional ring substituents, and when one or both are present, are the same or different and independently hydroxyl, halogen, alkyl, or aryl groups attached directly or through an ether linkage.

Claim 10 (original): The compound of claim 9 wherein the alkyl group is  $-\text{CH}_3$  or  $-\text{OCH}_3$ .

Claim 11 (original): The compound of claim 1 wherein  $R_4$  is an amine capping group selected from the groups consisting of hexyl, hexanoyl, heptanoyl, acetyl, phenylacetyl, cyclohexylacetyl, naphthylacetyl, cinnamoyl, benzyl, benzoyl, cinnamoyl, 12-Ado, 7'-amino heptanoyl, 6-Ahx, Amc, and 8-Aoc.

Claim 12 (original): The compound of claim 1 wherein  $R_3$  is a D-amino acid including an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl.

Claim 13 (original): The compound of claim 1 wherein  $R_3$  is a D-amino acid with an amine capping group and an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl.

Claim 14 (original): The compound of claim 1 wherein  $R_3$  is a dipeptide consisting of a D-amino acid including an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl and a second amino acid residue, wherein the D-amino acid is bonded to the ring nitrogen.

Claim 15 (original): The compound of claim 1 wherein R<sub>3</sub> is a dipeptide consisting of a D-amino acid including an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl and a second amino acid residue with an amine capping group.

Claim 16 (original): The compound of claim 1 wherein R<sub>3</sub> comprises a D-amino acid selected from the group consisting of Phe, Phe(2-Cl), Phe(4-Cl), Phe(2,4-diCl), Phe(2,4-diF), Phe(3,4-diCl), Phe(4-NO<sub>2</sub>), Phe(4-Me), Phe(4-Phenyl), HPhe, pF-Phe, Phe(4-Br), Phe(4-CF<sub>3</sub>), Phe(3,4-diF), Phe(4-I), Phe(2-Cl, 4-Me), Phe(2-Me, 4-Cl), Phe(2-F, 4-Cl), Phe(2,4-diMe), Phe(2-Cl, 4-CF<sub>3</sub>), and Phe(3,4-di-OMe).

Claim 17 (original): The compound of claim 1 wherein R<sub>3</sub> comprises a D-amino acid selected from the group consisting of Pgl, Trp, Nal 1, Nal 2, Bip, Dip, Bpa, Ser(Bzl), Ser(2-Naphthyl), Ser(Phenyl), Ser(4-Cl-Phenyl), Ser(2-Cl-Phenyl), Ser(p-Cl-Phenyl), Lys(Z), Lys(Z-2'Br), Lys(Bz), Thr(Bzl), Cys(Bzl), (N-PhEt)Nal2, Phg, 3-Pya, Qal(2'), Sal, Tpi, Tyr(2,6-DiCl-Bzl) and Tyr(Bzl).

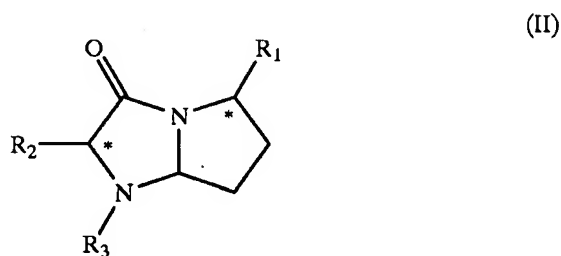
Claim 18 (original): The compound of claim 1 wherein R<sub>3</sub> comprises a second amino acid residue that is a an L-amino acid selected from the group consisting of Abu, 2-Abz, 3-Abz, 4-Abz, Achc, Acpc, Aib, Amb, Arg(Tos), Asp(anilino), Asp(3-Cl-anilino), Asp(3,5-diCl-anilino), 11-Aun, AVA, Beta-hHyp(Bzl), Cha, Chg, Cmpi, Disc, Dpr(beta-Ala), GM, GBzA, B-Gpa, GVA(Cl), His, hSer, Ser(Bzl), Tic, hHyp, Hyp(Bzl), Inp, 2-Naphthylacetyl, (Nlys)Gly, OcHx, Pip, 4-phenylPro, 5-phenylPro, Pyr, Sar, Tle, Tiq, Atc, Igl, Hyp(O-2-Naphthyl), Hyp(O-Phenyl), 2-Aic, Idc, 1-Aic, Beta-homoSer(Bzl), Ser(O-2-Naphthyl), Ser(O-Phenyl), Ser(O-4-Cl-Phenyl), Ser(O-2-Cl-Phenyl), Thr(Bzl), Tic, Beta-homoThr(Bzl), Thr(O-2-Naphthyl), Thr(O-Phenyl), Thr(O-4-Cl-Phenyl) and Thr(O-2-Cl-Phenyl), Nle, Leu, lie, Val and Beta-Ala.

Claim 19 (original): The compound of claim 1 wherein R<sub>3</sub> comprises an amine capping group selected from the group consisting of hexyl, hexanoyl, heptanoyl, acetyl, phenylacetyl,



cyclohexylacetyl, naphthylacetyl, cinnamoyl, benzyl, benzoyl, 7'-amino heptanoyl, 12-Ado, 6-Ahx, Amc, and 8-Aoc.

Claim 20 (original): A compound having the structure:



or a stereoisomer or pharmaceutically acceptable salt thereof,

wherein

R<sub>1</sub> is -L<sub>1</sub>-J;

R<sub>2</sub> is (CH<sub>2</sub>)<sub>y</sub>-W;

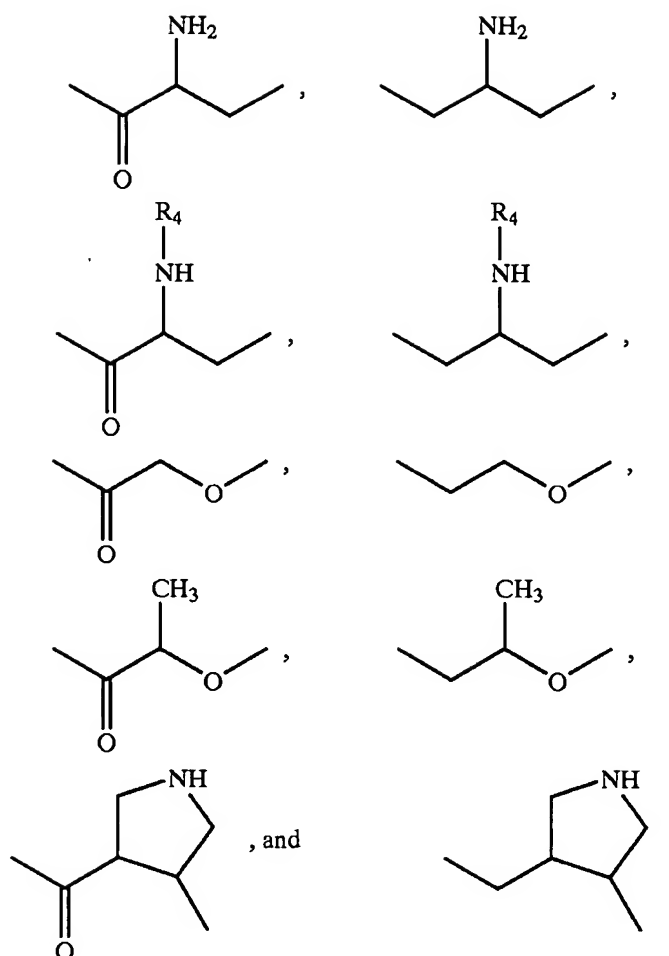
R<sub>3</sub> is -L<sub>2</sub>-Q;

L<sub>1</sub> is a linker selected from the group consisting of -(CH<sub>2</sub>)<sub>y</sub>-, -O-(CH<sub>2</sub>)<sub>y</sub>-, -O-, -NH-(CH<sub>2</sub>)<sub>y</sub>-,  
-(C=O)(CH<sub>2</sub>)<sub>y</sub>-, -(C=O)-O-(CH<sub>2</sub>)<sub>y</sub>-, and -CH<sub>2</sub>(C=O)NH-;

J is a ring structure selected from the group consisting of substituted or unsubstituted aromatic carbocyclic rings, substituted or unsubstituted non-aromatic carbocyclic rings, substituted or unsubstituted aromatic fused carbobicyclic ring groups, substituted or unsubstituted aromatic carbocyclic ring groups wherein the rings are joined by a bond or -O-, and substituted or unsubstituted aromatic fused heterobicyclic ring groups; wherein in each instance the rings comprise 5 or 6 ring atoms;

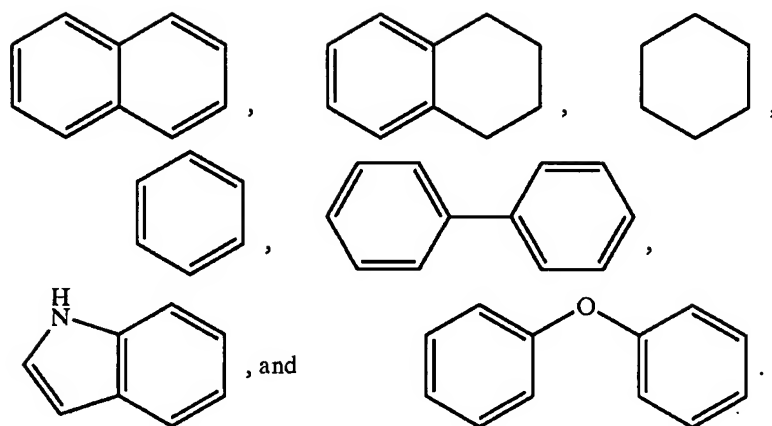
W is a heteroatom unit with at least one cationic center, hydrogen bond donor or hydrogen bond acceptor wherein at least one atom is N;

L<sub>2</sub> is a linker selected from the group consisting of



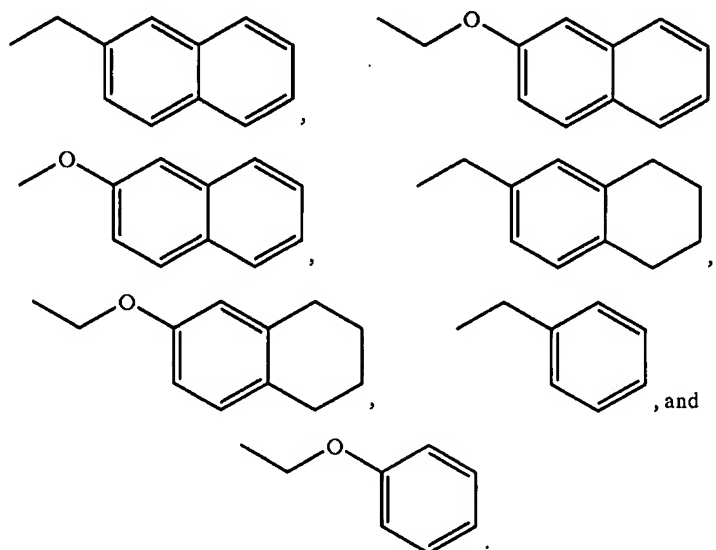
wherein the carbon atoms marked with an asterisk can have any stereochemical configuration.

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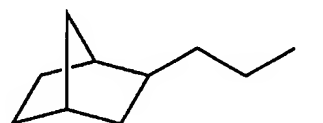
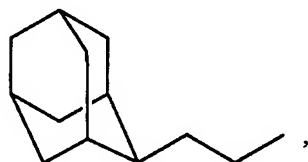
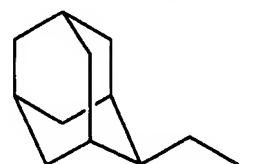
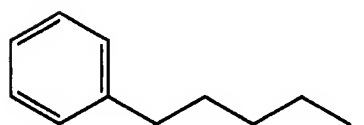
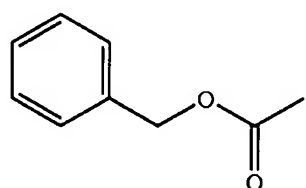
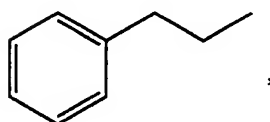
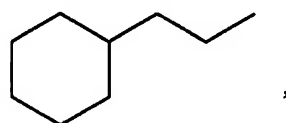
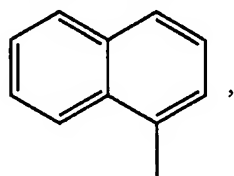
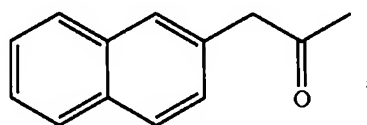
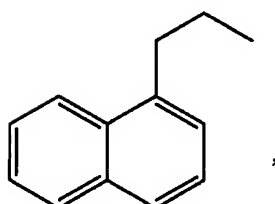
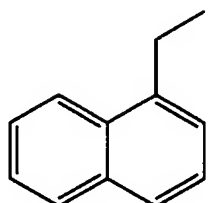
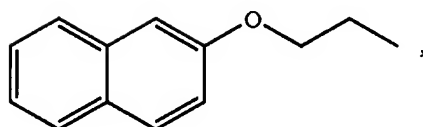
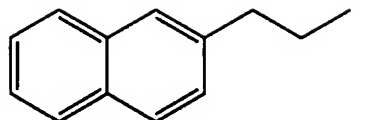


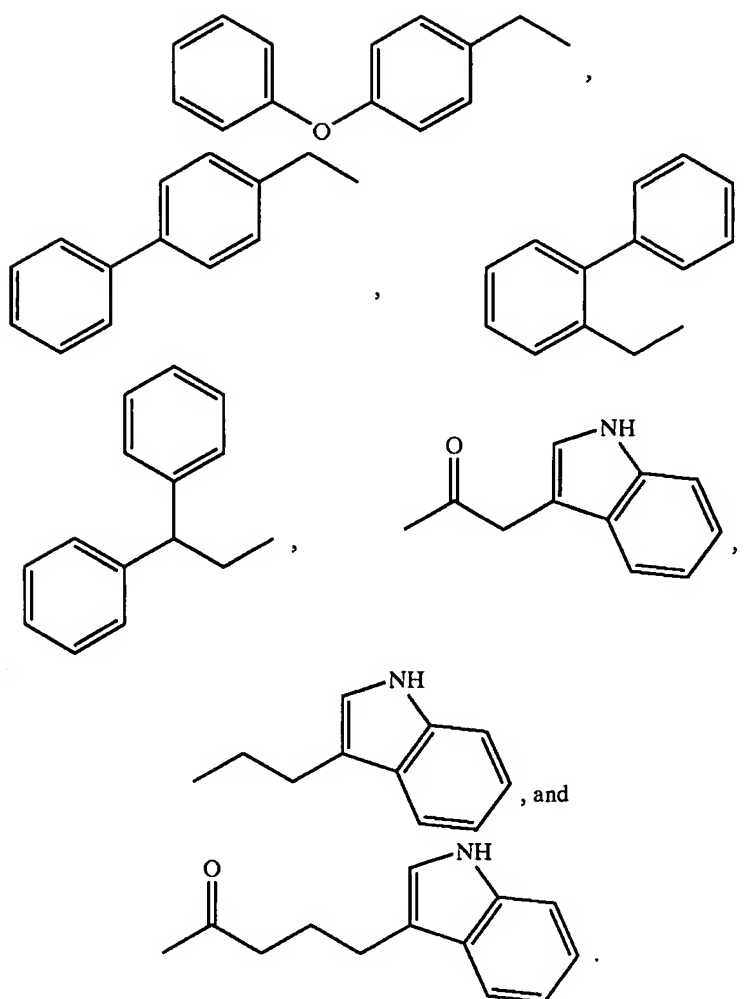
Claim 22 (original): The compound of claim 20 wherein at least one ring comprising J is functionalized with one or more halogen, alkyl or aryl groups.

Claim 23 (original): The compound of claim 20 wherein  $R_1$  is selected from the group consisting of



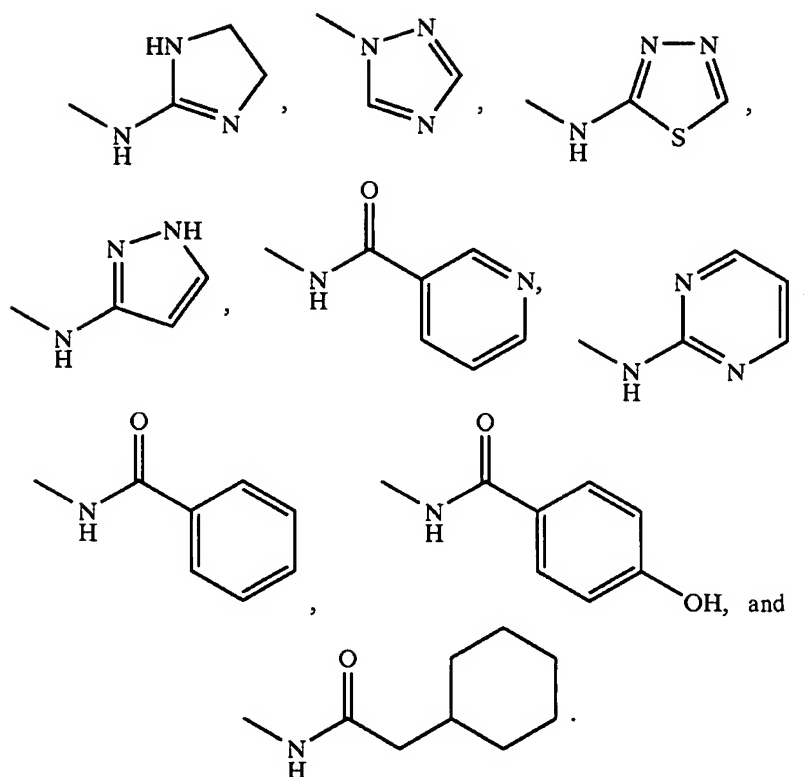
Claim 24 (original): The compound of claim 20 wherein  $R_1$  is selected from the group consisting of



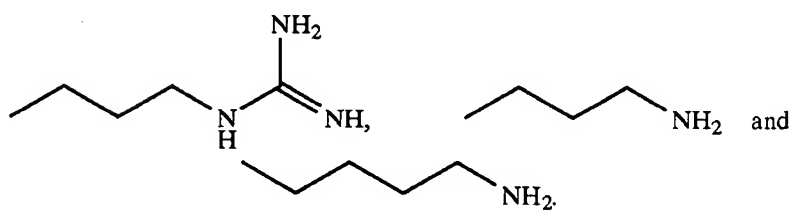


Claim 25 (original): The compound of claim 20 wherein W comprises a cationic center selected from the group consisting of  $\text{NH}_2$  and  $\text{NH}(\text{C}=\text{NH})\text{NH}_2$ .

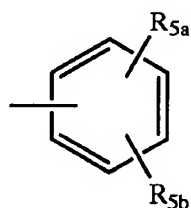
Claim 26 (original): The compound of claim 20 wherein W is selected from the group consisting of  $-\text{NHCOCH}_3$ ,  $-\text{CONHCH}_3$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NHMe}$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NH}^t$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NHPr}$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NHPr-I}$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NH}_2$ ,



Claim 27 (original): The compound of claim 20 wherein  $R_2$  is selected from the group consisting of



Claim 28 (original): The compound of claim 20 where Q is



and wherein  $R_{5a}$  and  $R_{5b}$  are optional ring substituents, and when one or both are present, are the same or different and independently hydroxyl, halogen, alkyl, or aryl groups attached directly or through an ether linkage.

Claim 29 (original): The compound of claim 28 wherein the alkyl group is  $-CH_3$  or  $-OCH_3$ .

Claim 30 (original): The compound of claim 20 wherein  $R_4$  is an amine capping group selected from the groups consisting of hexyl, hexanoyl, heptanoyl, acetyl, phenylacetyl, cyclohexylacetyl, naphthylacetyl, cinnamoyl, benzyl, benzoyl, cinnamoyl, 12-Ado, 7'-amino heptanoyl, 6-Ahx, Amc, and 8-Aoc.

Claim 31 (original): The compound of claim 20 wherein  $R_3$  is a D-amino acid including an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl.

Claim 32 (original): The compound of claim 20 wherein  $R_3$  is a D-amino acid with an amine capping group and an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl.

Claim 33 (original): The compound of claim 20 wherein  $R_3$  is a dipeptide consisting of a D-amino acid including an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl and a second amino acid residue, wherein the D-amino acid is bonded to the ring nitrogen.

Claim 34 (original): The compound of claim 20 wherein  $R_3$  is a dipeptide consisting of a D-amino acid including an aromatic carbocyclic ring selected from the group consisting of phenyl, substituted phenyl, naphthyl and substituted naphthyl and a second amino acid residue with an amine capping group.

Claim 35 (original): The compound of claim 20 wherein R<sub>3</sub> comprises a D-amino acid selected from the group consisting of Phe, Phe(2-Cl), Phe(4-Cl), Phe(2,4-diCl), Phe(2,4-diF), Phe(3,4-diCl), Phe(4-NO<sub>2</sub>), Phe(4-Me), Phe(4-Phenyl), HPhe, pF-Phe, Phe(4-Br), Phe(4-CF<sub>3</sub>), Phe(3,4-diF), Phe(4-I), Phe(2-Cl, 4-Me), Phe(2-Me, 4-Cl), Phe(2-F, 4-Cl), Phe(2,4-diMe), Phe(2-Cl, 4-CF<sub>3</sub>), and Phe(3,4-di-OMe).

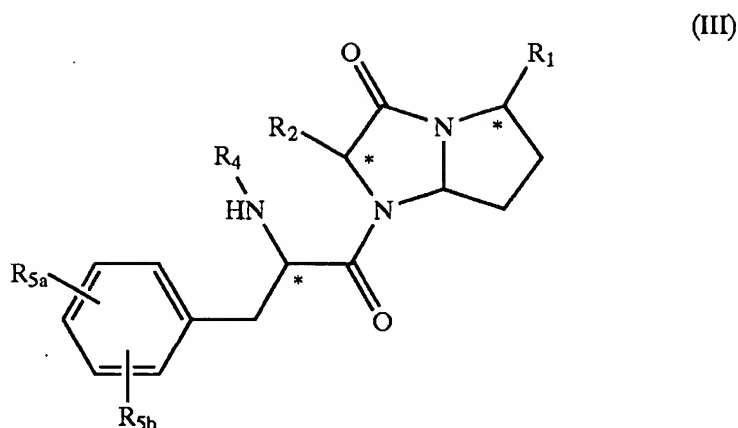
Claim 36 (original): The compound of claim 20 wherein R<sub>3</sub> comprises a D-amino acid selected from the group consisting of Pgl, Trp, Nal 1, Nal 2, Bip, Dip, Bpa, Ser(Bzl), Ser(2-Naphthyl), Ser(Phenyl), Ser(4-Cl-Phenyl), Ser(2-Cl-Phenyl), Ser(p-Cl-Phenyl), Lys(Z), Lys(Z-2'Br), Lys(Bz), Thr(Bzl), Cys(Bzl), (N-PhEt)Nal2, Phg, 3-Pya, Qal(2'), Sal, Tpi, Tyr(2,6-DiCl-Bzl) and Tyr(Bzl).

Claim 37 (original): The compound of claim 20 wherein R<sub>3</sub> comprises a second amino acid residue that is an L-amino acid selected from the group consisting of Abu, 2-Abz, 3-Abz, 4-Abz, Achc, Acpc, Aib, Amb, Arg(Tos), Asp(anilino), Asp(3-Cl-anilino), Asp(3,5-diCl-anilino), 11-Aun, AVA, Beta-hHyp(Bzl), Cha, Chg, Cmpi, Disc, Dpr(beta-Ala), GM, GBzA, B-Gpa, GVA(Cl), His, hSer, Ser(Bzl), Tic, hHyp, Hyp(Bzl), Inp, 2-Naphthylacetyl, (Nlys)Gly, OcHx, Pip, 4-phenylPro, 5-phenylPro, Pyr, Sar, Tle, Tiq, Atc, Igl, Hyp(O-2-Naphthyl), Hyp(O-Phenyl), 2-Aic, Idc, 1-Aic, Beta-homoSer(Bzl), Ser(O-2-Naphthyl), Ser(O-Phenyl), Ser(O-4-Cl-Phenyl), Ser(O-2-Cl-Phenyl), Thr(Bzl), Tic, Beta-homoThr(Bzl), Thr(O-2-Naphthyl), Thr(O-Phenyl), Thr(O-4-Cl-Phenyl) and Thr(O-2-Cl-Phenyl), Nle, Leu, Ile, Val and Beta-Ala.

Claim 38 (original): The compound of claim 20 wherein R<sub>3</sub> comprises an amine capping group selected from the group consisting of hexyl, hexanoyl, heptanoyl, acetyl, phenylacetyl, cyclohexylacetyl, naphthylacetyl, cinnamoyl, benzyl, benzoyl, 7'-amino heptanoyl, 12-Ado, 6-Ahx, Amc, and 8-Aoc.

Claim 39 (original): A compound having the structure:





or a stereoisomer or pharmaceutically acceptable salt thereof,

wherein

R<sub>1</sub> is -L<sub>1</sub>-J;

R<sub>2</sub> is (CH<sub>2</sub>)<sub>y</sub>-W;

R<sub>4</sub> is H or a unit selected from the group consisting of an amine capping group, a second amino acid residue, and a second amino acid residue with an amine capping group;

R<sub>5a</sub> and R<sub>5b</sub> are optional ring substituents, and when one or both are present, are the same or different and independently hydroxyl, halogen, alkyl, or aryl groups attached directly or through an ether linkage;

L<sub>1</sub> is a linker selected from the group consisting of -(CH<sub>2</sub>)<sub>y</sub>-, -O-(CH<sub>2</sub>)<sub>y</sub>-, -O-, -NH-(CH<sub>2</sub>)<sub>y</sub>-, -(C=O)(CH<sub>2</sub>)<sub>y</sub>-, -(C=O)-O-(CH<sub>2</sub>)<sub>y</sub>-, and -CH<sub>2</sub>(C=O)NH-;

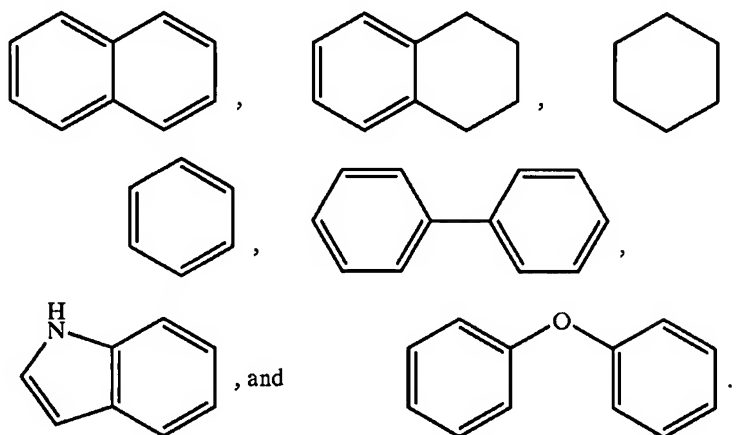
J is a ring structure selected from the group consisting of substituted or unsubstituted aromatic carbocyclic rings, substituted or unsubstituted non-aromatic carbocyclic rings, substituted or unsubstituted aromatic fused carbobicyclic ring groups, substituted or unsubstituted aromatic carbocyclic ring groups wherein the rings are joined by a bond or -O-, and substituted or unsubstituted aromatic fused heterobicyclic ring groups; wherein in each instance the rings comprise 5 or 6 ring atoms;

W is a heteroatom unit with at least one cationic center, hydrogen bond donor or hydrogen bond acceptor wherein at least one atom is N; and

y is at each occurrence independently from 1 to 6;

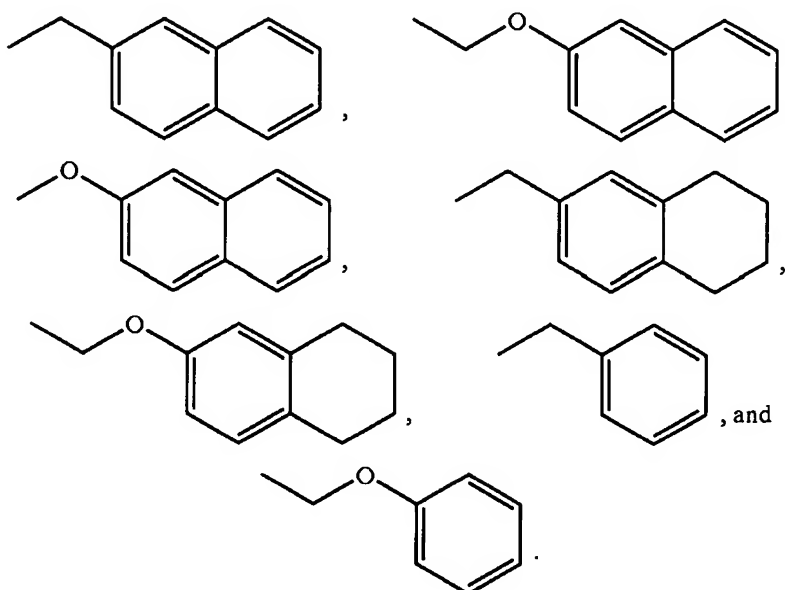
wherein the carbon atoms marked with an asterisk can have any stereochemical configuration.

Claim 40 (original): The compound of claim 39 wherein J is a substituted or unsubstituted ring structure selected from the group consisting of

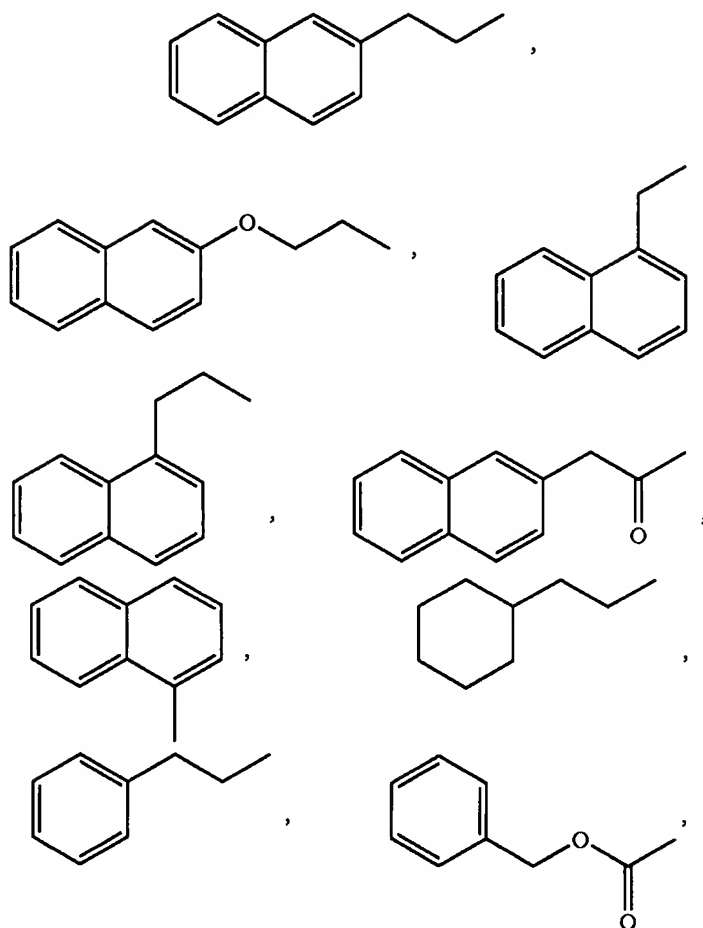


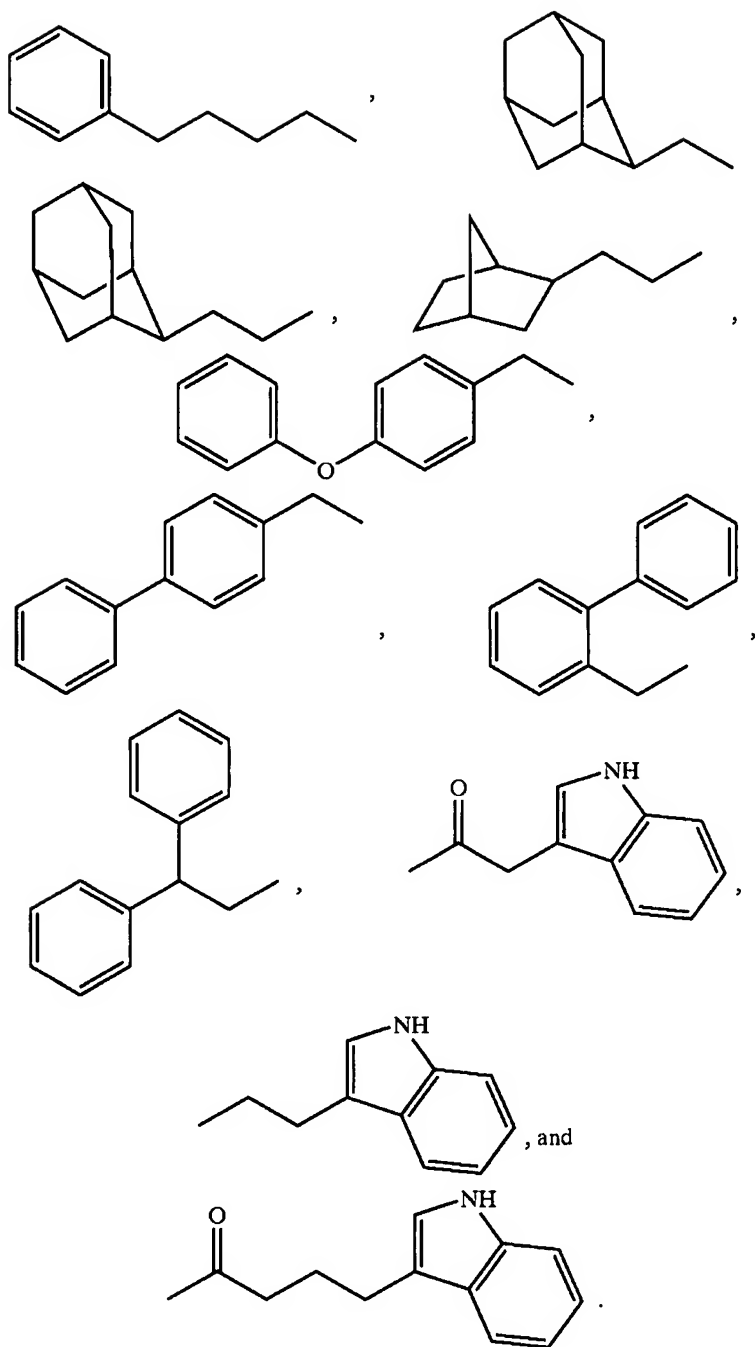
Claim 41 (original): The compound of claim 39 wherein at least one ring comprising J is functionalized with one or more halogen, alkyl or aryl groups.

Claim 42 (original): The compound of claim 39 wherein R<sub>1</sub> is selected from the group consisting of



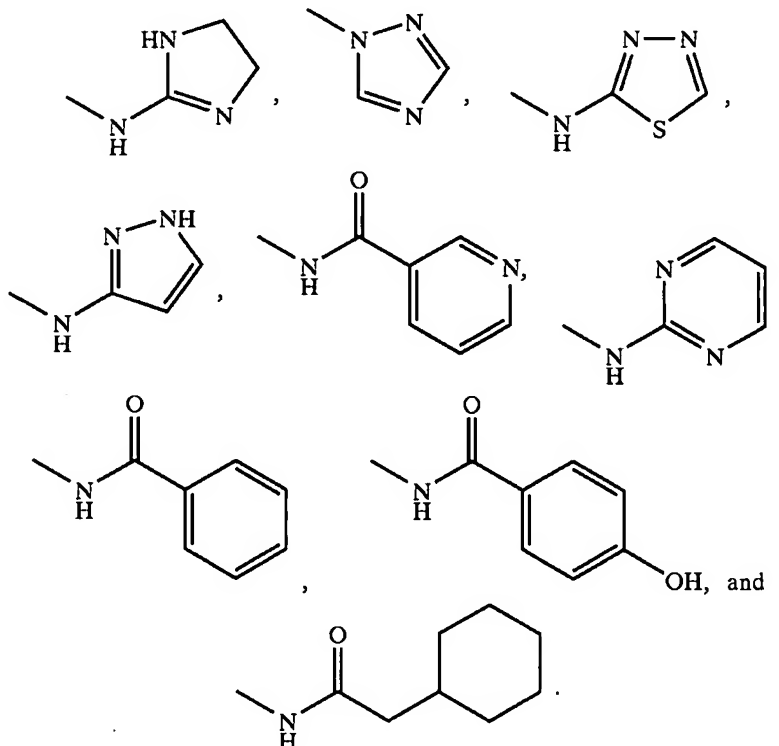
Claim 43 (original): The compound of claim 39 wherein R<sub>1</sub> is selected from the group consisting of



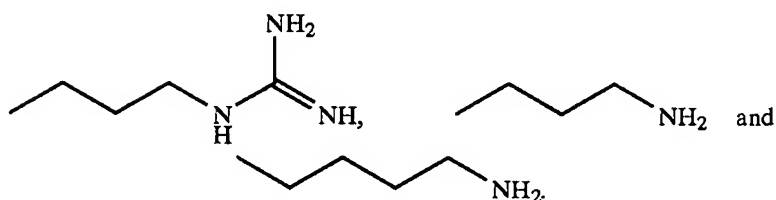


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Claim 45 (original): The compound of claim 39 wherein W is selected from the group consisting of  $-\text{NHCOCH}_3$ ,  $-\text{CONHCH}_3$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NHMe}$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NHEt}$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NHPr}$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NHPr-I}$ ,  $-\text{NH}(\text{C}=\text{NH})\text{NH}_2$ ,



Claim 46 (original): The compound of claim 39 wherein  $\text{R}_2$  is selected from the group consisting of



Claim 47 (original): The compound of claim 39 wherein  $\text{R}_4$  comprises an amine capping group selected from the groups consisting of hexyl, hexanoyl, heptanoyl, acetyl, phenylacetyl, cyclohexylacetyl, naphthylacetyl, cinnamoyl, benzyl, benzoyl, cinnamoyl, 12-Ado, 7'-amino

heptanoyl, 6-Ahx, Amc, and 8-Aoc.

Claim 48 (original): The compound of claim 39 wherein R<sub>4</sub> comprises a second amino acid residue that is an L-amino acid selected from the group consisting of Abu, 2-Abz, 3-Abz, 4-Abz, Achc, Acpc, Aib, Amb, Arg(Tos), Asp(anilino), Asp(3-Cl-anilino), Asp(3,5-diCl-anilino), 11-Aun, AVA, Beta-hHyp(Bzl), Cha, Chg, Cmpi, Disc, Dpr(beta-Ala), GM, GBzA, B-Gpa, GVA(Cl), His, hSer, Ser(Bzl), Tic, hHyp, Hyp(Bzl), Inp, 2-Naphthylacetyl, (Nlys)Gly, OcHx, Pip, 4-phenylPro, 5-phenylPro, Pyr, Sar, Tle, Tiq, Atc, Igl, Hyp(O-2-Naphthyl), Hyp(O-Phenyl), 2-Aic, Idc, 1-Aic, Beta-homoSer(Bzl), Ser(O-2-Naphthyl), Ser(O-Phenyl), Ser(O-4-Cl-Phenyl), Ser(O-2-Cl-Phenyl), Thr(Bzl), Tic, Beta-homoThr(Bzl), Thr(O-2-Naphthyl), Thr(O-Phenyl), Thr(O-4-Cl-Phenyl) and Thr(O-2-Cl-Phenyl), Nle, Leu, Ile, Val and Beta-Ala.

Claim 49 (currently amended): A composition comprising a compound ~~of any of any one~~ of claims 1, 20 and 39 of the foregoing structures in combination with a pharmaceutically acceptable carrier.

Claim 50 (withdrawn): A method for altering a disorder or condition associated with the activity of a melanocortin receptor, comprising administering to a patient a therapeutically effective amount of the composition of claim 49.

Claim 51 (withdrawn): The method of claim 50 wherein the disorder or condition is an eating disorder.

Claim 52 (withdrawn): The method of claim 51 wherein the eating disorder is cachexia.

Claim 53 (withdrawn): The method of claim 51 wherein the eating disorder is obesity and associated impairment of energy homeostasis.

Claim 54 (withdrawn): The method of claim 50 wherein the disorder or condition is

sexual dysfunction.

Claim 55 (withdrawn): The method of claim 54 wherein the sexual dysfunction is  
erectile dysfunction.

Claim 56 (withdrawn): The method of claim 54 wherein the sexual dysfunction is female  
sexual dysfunction.